compliance with pneumococcal vaccination between baseline data, prior and post intervention ($p=0.895$).

Conclusion: Placing a card reminding providers to check 3 RA quality measures significantly improved CDAI documentation after 30 days of starting the intervention. The compliance with TBsc prior to starting a new biologic agent was 100% even before the intervention, which was better compared to baseline data, likely due to providers being aware there was a problem after initial data was collected. We did not find improvement in pneumococcal immunization rate, most likely because there are multifactorial components to motivating patients to get the vaccine. Our results suggest that interventions as simple as raising provider awareness to a problem such as TB screening, and an index card to remind people to document CDAI can be effective to improve QI measures in RA patients in underserved communities.

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OP0317

ASSOCIATION OF PATIENT SATISFACTION WITH HEALTHCARE UTILIZATION, COST, AND QUALITY OF LIFE IN RHEUMATOID ARTHRITIS

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Background: Patient satisfaction and experience with care is being used as a surrogate marker of quality and value of healthcare delivery. No study has evaluated the association of patient satisfaction with healthcare utilization and cost, and quality of life in RA patients.

Objectives: To examine the association of RA patient satisfaction with healthcare utilization and cost, and quality of life.

Methods: 2010-2015 longitudinal files from the Medical Expenditure Panel Survey (MEPS), a nationally representative survey of the US civilian non-institutionalized population were used to identify patients with self-reported RA diagnosis. MEPS has overlapping panel design with participants interviewed up to 5 rounds over a 2- year period. In rounds 2 and 4, patient satisfaction is assessed by the four items about physician interaction – listened carefully, explained things well, showed respect, and spent enough time; and one item for overall satisfaction with quality of care received. A patient satisfaction score was constructed from standardized composite score of these items, and classified as most satisfied (patient satisfaction quartile 4) and less satisfied (patient satisfaction quartiles 1-3). The outcome measures were assessed in year 2: healthcare utilization (any emergency department visit, any inpatient stay, number of visits to office-based providers, outpatient department, and prescription drugs); total healthcare expenditures (measured in 2015 dollars), and quality of life (QoL, measure using 12-item Short Form healthy survey (SF-12)). Two statistical approaches were used: a standard logistic regression comparing most satisfied with less satisfied, and propensity score matching. Propensity scores were estimated using a logistic regression to model most satisfied quartile (vs. lower) as a function of covariates (satisfaction score in year 1 were matched 1 to 1 without replacement using a

greedy matching algorithm. After matching, means of outcomes in year 2 were compared among matched pairs. Standard errors were estimated using bootstrapping method with 200 repetitions. Covariates included socio-demographic measures, health behaviors, health status (Charlson Comorbidity Index, general health, activity limitation, and pain affecting activities); RA measures (DMARDs, corticosteroids, and analgesics use); and the Year 1 outcome measures (utilization, total expenditure, QoL).

Results: 568 patients had a self-reported RA diagnosis. 1025 (65.4%) patients were analyzed (326 patients excluded for missing satisfaction response; 201 patients for missing information on other study variables; and 16 for not having data in all 5 rounds). The results using the propensity score matching approach are presented in the Table (202 most satisfied matched to 202 less satisfied patients). There were no differences in the healthcare utilization, cost and QoL among the two groups. Logistic regression approach yielded similar results.

Outcome	Most satisfied, Q4	Less satisfied, Q1-Q3	Difference	Bootstrapped SE (reps 200)	P Value
Total expenditure, \$	13452	14695	-1243	2607	0.633
Number of Office Visits	13.24	12.73	0.51	1.55	0.741
Number of Outpatient Visits	1.06	1.24	-0.17	0.35	0.622
Number of Inpatient Visits	0.23	0.34	-0.09	0.085	0.267
Number of ER visits	0.460	0.525	-0.064	0.107	0.547
Number of Prescriptions	48.936	51.465	-2.530	4.351	0.561
QoL - Mental health summary scores	47.557	47.186	0.371	1.116	0.739
QoL - Physical health summary scores	36.526	34.840	1.686	0.969	0.082

Conclusion: Patient satisfaction score of RA patients was not associated with healthcare utilization and cost, and quality of life measures.

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Teenage look in the mirror (sexuality and body image meeting health care)

OP0318-HPR

IS PSYCHOLOGICAL SUPPORT REACHING THOSE IN MOST NEED? A SURVEY OF PEOPLE WITH RHEUMATOID ARTHRITIS AND ADULTS WITH JUVENILE IDIOPATHIC ARTHRITIS:

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Background: Rheumatoid arthritis (RA) and adult juvenile idiopathic arthritis (AJIA) is associated with a significant impact on psychological well-being.¹⁻² UK guidelines for the management of RA³⁻⁵ state that psychological interventions should be offered to people with RA to help them adjust to living with their condition and manage their psychological well-being. Three in four rheumatology units in the UK however, rate their overall provision of psychological support as inadequate.⁶

Objectives: To establish levels of anxiety and depression in people with RA or AJIA and how this relates to the prevalence of diagnosed mood disorders and receipt of psychological support.

Methods: The 2018 National Rheumatoid Arthritis Society (NRAS) 'Emotional Health and Well-being Matters' survey was designed by patients and researchers. This included a questionnaire designed to capture self-reported comorbidities, receipt of psychosocial support and the Hospital Anxiety and Depression Scale (HADS).⁷ Participants were recruited by NRAS via their social media platforms, membership and non-membership lists and in newsletters and forum. The survey was open from May-July 2018. Recruitment was focused on those diagnosed with RA or AJIA aged 18 years and over and living in the UK.

Results: A total of 1565 people with RA and 55 AJIA completed the survey. Although mean scores on the HADS were within the normal range in both populations, over 25% of the samples were experiencing clinical levels of anxiety or depression. Over half of those reporting clinical levels of anxiety or depression had never received a formal diagnosis. Most concerning however, was that 1 in 2

respondents with RA and 1 in 3 AJIA who had either clinical levels or a formal diagnosis of anxiety or depression had never received any psychological support. **Conclusion:** This survey indicates that despite meeting the criteria for anxiety or depression a majority of people with RA and AJIA have not been formally diagnosed with a mental health condition and many are not receiving the support they should. It is therefore an imperative for rheumatology services to routinely measure anxiety and depression in order to intervene before the individual is in crisis. Acting early by sign-posting and referring on to specialist services has the potential to improve a person's physical and psychological well-being.

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New assessments in clinical practice

OP0319

DIAGNOSTIC ACCURACY OF ULTRASOUND IN CALCIUM PYROPHOSPHATE DEPOSITION DISEASE: PRELIMINARY RESULTS OF THE OMERACT US IN CPPD SUB-GROUP

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Background: 9The OMERACT Ultrasound (US) in calcium pyrophosphate deposition disease (CPPD) sub-task force has been working on the assessment of the

utility of US in CPPD since 2014 first creating definitions for CPPD identification and then demonstrating that US is a reliable tool[1].

Objectives: Objective of this study is to assess the diagnostic accuracy of US in CPPD

Methods: This is a multicentre international diagnostic accuracy study involving 17 centres from 9 countries. We enrolled in this study consecutive patients waiting to undergo knee replacement surgery due to severe osteoarthritis. Each patient underwent US examination of the knee, focusing on the menisci and the hyaline cartilage, the day prior to surgery, scoring each site according to the presence/absence of CPP as defined by OMERACT[1]. After surgery, the menisci and the condyles were collected and examined microscopically. Six samples were collected, both from the surface and from the internal part of menisci and cartilage trying to cover a large part of the structure. All slides were observed under transmitted light microscopy and by compensated polarised microscopy. A dichotomous score was given for the presence/absence of CPP crystals. US and microscopic analysis were performed by blinded operators. Sensitivity and specificity of US were calculated using microscopic findings of the menisci and cartilage as the gold standard.

	(95% Confidence Interval)		
Prevalence	40%	23%	59-6%
Sensitivity	83.3%	51.6%	97.9%
Specificity	61.1%	35.7%	92.7%
ROC area	.722	.562	.882
Likelihood ratio (+)	2.14	1.14	4.03
Likelihood ratio (-)	.273	.073	1.02
Odds ratio	7.86	1.42	41.2
Positive predictive value	58.8%	32.9%	81.6%
Negative predictive value	64.6%	54.6%	98.1%

Results: These preliminary analyses include 30 patients. The mean age was 71yrs (SD±9.1), 19 (63%) were females. 17 patients were positive at US analysis and 12 at microscopic analysis. Diagnostic accuracy results of US at patient level, are presented in figure 1.

Conclusion: These preliminary results demonstrate that US is a sensitive exam for identification of CPPD with acceptable specificity. US is the first diagnostic technique with consistent reliability and validity to be applied for non-invasive screening for CPPD in clinical practice.

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